



Winston H. Hickox  
Secretary for  
Environmental  
Protection

# Department of Pesticide Regulation

Paul E. Helliker, Director  
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Gray Davis  
Governor

## MEMORANDUM

TO: Paul H. Gosselin  
Acting Chief Deputy Director

FROM: Paul E. Helliker *Paul Helliker*  
Director  
(916) 445-4000

DATE: November 12, 1999

SUBJECT: DIRECTOR'S PROPOSED DECISION CONCERNING METHYL  
PARATHION AS A TOXIC AIR CONTAMINANT

Attached is a public notice of the proposed decision concerning my response to the scientific review panel's findings on methyl parathion as a toxic air contaminant. My response has been made in accordance with all authorities and requirements stipulated in the Food and Agricultural Code and California Code of Regulations which mandate this determination. The scientific review panel's findings were transmitted to me on November 5, 1999. Therefore, my response has been made within the 10-day statutory deadline.

I thank you, staff, and all the members of the scientific review panel for the excellent work.

Attachment

cc: Branch Chiefs  
Alan Lloyd, ARB  
Joan Denton, OEHHA Director  
Scientific Review Panel





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## MEMORANDUM

POST UNTIL  
DECEMBER 7, 1999

### NOTICE OF PROPOSED DECISION CONCERNING THE DIRECTOR'S DECLARATION OF METHYL PARATHION AS A TOXIC AIR CONTAMINANT

Section 14023 of the Food and Agricultural Code requires the Director of the Department of Pesticide Regulation (DPR) to determine if a pesticide is a toxic air contaminant (TAC) after receiving the findings of the Scientific Review Panel. Based on the findings of the Scientific Review Panel's assessment of the report entitled, "Evaluation of Methyl Parathion as a Toxic Air Contaminant," and the criteria given in the California Code of Regulations, Title 3, section 6890(b), the Director proposes to declare methyl parathion a toxic air contaminant.

#### Background

With the enactment of California's Toxic Air Contaminant Act (Assembly Bill 1807, Tanner, Chapter 1047, Statutes of 1983; amended by Tanner, Chapter 1380, Statutes of 1984), the Legislature created the statutory framework for the evaluation and control of chemicals as TACs. The statute defines TACs as air pollutants that may cause or contribute to increases in serious illness or death, or that may pose a present or potential hazard to human health. DPR is responsible for the evaluation of pesticides as TACs.

In general, the law focuses on the evaluation and control of pesticides in ambient community air. In implementing the law, DPR must: (1) conduct a review of the physical properties, environmental fate, and human health effects of the candidate pesticide; (2) determine the levels of human exposure in the environment; and (3) estimate the potential human health risk from those exposures. The law requires DPR to list in regulation those pesticides that meet the criteria to be TACs.

For each pesticide, the law requires the preparation of a report that includes: an assessment of exposure of the public to ambient concentrations of the pesticide; a risk assessment, which includes data on health effects, including potency, mode of action, and other biological factors; an overview of the environmental fate and use of the pesticide; and the results of air monitoring studies conducted in California to measure the levels of the candidate pesticide present in ambient air. The report is reviewed by the Office of Environmental Health Hazard Assessment, the Air Resources Board, and is made available for public review. Based on the results of these reviews, the draft report is revised as appropriate. The draft undergoes a rigorous peer review for scientific soundness by the Scientific Review Panel, a panel of experts representing a range of scientific disciplines. Based on the results of this comprehensive evaluation, the Director of



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DPR determines whether the candidate is a TAC. If the Director determines the pesticide meets the criteria to be a TAC, DPR declares the pesticide a TAC in regulation, and adds it to the TAC list.

Once a candidate pesticide has been declared a TAC, it enters phase two of the program—the mitigation, or control, phase. In the mitigation phase, DPR investigates the need for, and appropriate degree of, control for the TAC. If reductions in exposure are needed, DPR must develop control measures to reduce emissions to levels that adequately protect public health.

### Department Conclusions

Current state regulations specify that if air concentrations for a pesticide exceed levels that would result in a ten-fold lower risk than a negligible risk, the pesticide shall be identified as toxic air contaminant. For non-oncogenic toxicity endpoints that are generally considered as having a threshold dose below which no effects are expected, a margin of exposure (MOE) of 100 is generally considered adequate for the protection of human health when the no observable effect level (NOEL) was determined in animals. Therefore, according to the criteria established in regulations, pesticides with a MOE less than 1,000 should be identified as a toxic air contaminant.

For methyl parathion, the MOEs for acute, subchronic, and chronic ambient air exposure are less than 1,000 for a child. The MOE for a 24-hour application site exposure is as low as 20 at 17 yards from a rice application site. Under this scenario, an exposure adjacent to the application site exceeding 30 minutes would result in a MOE below 1,000, the criteria for identifying a toxic air contaminant.

The Scientific Review Panel agrees with the science presented in the report and recommends that the Director identify methyl parathion as a TAC.

### Department Actions

DPR proposes to adopt a regulation designating methyl parathion as a toxic air contaminant. DPR proposes to add methyl parathion to the list of pesticides in the California Code of Regulations, Title 3, section 6860(a).

DPR will conduct a public hearing concerning the proposed regulation.

Approved By:

Paul E. Helliker  
Paul E. Helliker, Director

Date: Nov. 12, 1999